

Max R. Piana, Ph.D.

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EDUCATION

Rutgers University New Brunswick, NJ
Ph.D., Ecology & Evolution (2014-2019)
Committee: Steven Handel, Myla Aronson, Richard Hallett, Peter Morin, Steward Pickett

Yale School of Forestry and Environmental Studies New Haven, CT
Master of Environmental Management, Urban Ecology & Design (2009-2011)
Advisors: Stephen R. Kellert, Mark S. Ashton

Wesleyan University Middletown, CT
B.A., Environmental Studies, Psychology (2001-2005)
Advisors: Barry Chernoff, Rachell Russell

PROFESSIONAL APPOINTMENTS & EXPERIENCE

USDA Forest Service Amherst, MA
Post-doctoral research ecologist (2020-present)

University of Massachusetts Philadelphia, PA
Post-doctoral research associate based at the USFS Philadelphia Urban Field Station (2019-2020)

Hutcheson Memorial Forest Center Somerset, NJ
Land manager at National Natural Landmark and ecological preserve (2014-2019)

KieranTimberlake Philadelphia, PA
Environmental researcher (2012-2014)

Hixon Center for Urban Ecology New Haven, CT
Urban forest research coordinator (2011-2012)

Urban Resources Initiative New Haven, CT
Community forester and urban greenspace restoration supervisor (2009-2011)

Yestermorrow Design-Build School Waitsfield, VT
Sustainable design and building teaching assistant (2008-2009)

Newfound Harbor Marine Institute Big Pine Key, FL

Coastal ecology educator (2006-2007)

TEACHING EXPERIENCE

Rutgers University, Ecology, Evolution and Natural Resources New Brunswick, NJ
Lecturer, Urban Ecology (2016)

Pratt Institute, School of Architecture Brooklyn, NY
Lecturer, Ecology for Architects (2016)

Yale School of Forestry and Environmental Studies New Haven, CT
Teaching Assistant, Emerging Markets in Ecosystem Services (2011)

Wesleyan University Middletown, CT
Teaching Assistant, Psychology (2004-2005)

Guest Lecturer

Rutgers University (2015-2019, Plant Ecology, Restoration Ecology), PennDesign (2014-2019, Landscape Architecture, Historic Preservation and Planning), Yale School of Forestry and Environmental Studies (2013, Emerging Markets for Ecosystem Services), Wesleyan University (2011-2012, Environmental Studies)

Architecture, Landscape Architecture, and Planning Studio Critic and Consultant

PennDesign (2012-2019: Landscape Architecture, Urban Planning, Historic Preservation), Pratt Institute (2015-2017: Architecture), Temple University (2017: Architecture), Rutgers University (2018: Landscape Architecture)

PEER REVIEWED PUBLICATIONS & BOOK CHAPTERS

Piana, M.R., Pregitzer, C., & Hallett, R.A. *In Press*. Advancing management in urban-forested natural areas: toward an urban silviculture? *Frontiers in Ecology and the Environment*.

Piana, M.R., Aronson, M.F.J., Hallett, R.A., Conway, E., & Handel SN. *In Press*. Natural regeneration in urban forests is limited by early establishment: implications for management. *Ecological Applications*.

Knapp, S., Hahs, A., Threlfall, K., [and 19 others, including **Piana, M.R.** *In press*. A research agenda for urban biodiversity in the global extinction crisis. *Bioscience*.

Piana, M.R., Aronson, M.F.J., Pickett, S.T.A., & Handel, S.N. 2019. Plants in the city: understanding recruitment dynamics in urban landscapes. *Frontiers in Ecology and the Environment*, 17(8):455-463.

Aronson, M.F.J., **Piana M.R.**, Mclvor, J.S., & Pregitzer, C.C. 2017. Management of Plant Diversity in Cities. In A. Ossola and J. Niemela (Eds.), *Urban Biodiversity: From Research to Practice* (pp.115-134). Routledge.

Carlisle, S.C. & **Piana, M.R.** 2015. Green Roof Plant Assemblage and Dynamics. In Sutton, E. (Ed.) *Green Roof Ecosystems* (pp. 285-310). Springer International Publishing.

Piana, M.R., & Carlisle, S.C. 2014. Green roofs over time: a spatially explicit method for studying green roof vegetative dynamics and performance. *Cities and the Environment*, 7(2): 1-10.

Jack-Scott, E., **Piana, M.R.**, Troxel, B., Murphy-Dunning, C., & Ashton, M.S. 2013. Stewardship success: how community group dynamics affect urban street tree survival and growth. *Arboriculture & Urban Forestry*, 39(4): 189-196.

Troxel, B., **Piana, M.R.**, Ashton, M., & Murphy-Dunning, C. 2013. Relationships between bole and crown size for urban trees in the northeastern USA. *Urban Forestry & Urban Greening*, 12(2): 144-153.

PEER REVIEWED PUBLICATIONS IN REVIEW & PREPARATION (*manuscripts available upon request*)

Piana, M.R., Aronson, M.F.J., & Handel SN. Evidence of functional shifts in urban forest ecosystems: seed removal in urban and rural forests. Manuscript in preparation, to be submitted to *Urban Ecosystems*.

Piana, M.R., Aronson, M.F.J., Hallett, R.A., & Handel SN. Native tree recruitment in urban and rural forests: differences in seed and site limitation. Manuscript in preparation, to be submitted to *Forest Ecology and Management*.

Brown, J.A., Lockwood, J.L., **Piana, M.R.**, & Beardsley, C. Things that go bump in the light: artificial light increases abundance of arthropod predators/detritivores/parasites". Manuscript in preparation, to be submitted to *Urban Ecosystems*.

Piana, M.R., Aronson, M.F.J., & Handel SN. Early-establishment limitation in urban and rural forests: seed predation and herbivory limit tree seedling recruitment in urban forested natural areas. Manuscript in preparation, to be submitted to *Journal of Applied Ecology*.

Aronson, M.F.J., **Piana M.R.**, Brown, J.A., & Handel, S.N. Sixty-seven years of old-growth forest community change in an urbanizing landscape. Manuscript in preparation, to be submitted to *Journal of Ecology*.

*Conway, E. **Piana, M.R.**, & Aronson, M.F.J. The relationship between understory plant communities and the seed bank in urban and rural temperate deciduous forests. Manuscript in preparation.

**Student mentee*

NON-PEER REVIEWED PUBLICATIONS & POPULAR WRITING

Piana M.R., & Troxel, B. 2014. Beyond planting: an urban forestry primer. *Scenario Journal* (4). Accessed online at <http://scenariojournal.com/article/beyond-planting/>

AWARDS & RECOGNITION

- Joan Ehrenfeld Award for Best Student Presentation in Urban Ecology, Ecological Society of America National Convention, Louisville, KY (2019).
- Architecture Magazine R+D Award (2013).
- NCAA Division III Academic All-American (2002-2005).
- Henry David Thoreau Environmental Scholar (2001).

GRANTS & FELLOWSHIPS

- William Penn Foundation, Urban-Adapted Phytotechnology Project, 2020-2022 (Co-PI, \$325,000)
- Hutcheson Memorial Forest Center Summer Research Fellow, 2016-2018 (\$7,500)
- Torrey Botanical Society Graduate Fellow, 2016 (\$2,500)
- Philadelphia Botanical Society Bayard Long Fellow, 2016 (\$2,500)
- Rutgers Graduate Assistantship Research Awards, 2014-2016 (\$5,000)
- USDA Forest Service Northern Research Center for Resilient Landscapes Fellow, 2015 (\$5,000)
- Yale School of Management Sobotka Venture Seed Grant, 2011 (\$10,000)
- National Garden Club Graduate Scholarship, 2010 (\$5,000)
- Community Foundation of Western Massachusetts, 2009-2011 (\$10,000)

CONFERENCE & INVITED PRESENTATIONS (Representative Selection)

Piana, M.R. "Forests in the City". Philadelphia Botanical Club Lecture Series, Philadelphia, PA. 2020. Invited Presenter.

Piana, M.R. "Forests in the city: understanding urban-driven shifts in plant recruitment dynamics". Ecological Society of America. Louisville, KY 2019. Organized Oral Session. Presenter. (Joan Ehrenfeld Award for Best Student Presentation in Urban Ecology)

Piana, M.R. "Natural regeneration in the city: comparing plant recruitment dynamics in urban and rural forested natural areas." International Union of Forest Research Organizations. Curitiba, BZ. 2019. Presenter.

Piana, M.R. "Building the urban forest: processes, performance, and scenarios." Harvard University Graduate School of Design. 2019. Invited Presenter.

Piana, M.R. "From tree to forest: advancing urban restoration ecology" New Jersey Soil and Water Conservation Society. New Brunswick, NJ. 2018. Invited Presenter.

Piana, M.R. "Seed predation in urban versus rural forests: evidence of functional homogenization?" Rutgers Ecology Graduate Student Association Seminar. New Brunswick, NJ. 2018. Presenter.

Piana, M.R., "Limitations to natural regeneration and forest conservation in cities." North American Congress for Conservation Biology, Toronto, CAN. 2018. Poster.

Piana, M.R., Hallett, R.A. Pregitzer, C. "Silvicultural practices in urbanizing areas." New England Society of American Forestry. Nashua, NH. 2018. Presenter.

Piana, M.R., Handel, S.N., Aronson, M.F.J., Hallett, R.A., Pickett, STA, Morin, PJ. "Barriers to seedling recruitment: seed predator preference and removal rates." ESA. Portland, OR. 2017. Poster.

Piana, M.R. "Recruitment limitation following deer exclusion in an old growth forest." Hutcheson Memorial Forest Research Symposium, New Brunswick, NJ. 2017. Presenter.

Piana, M.R., "Creating the urban forest: Afforestation strategies for restoring anthropogenic landscapes." Center for Resilient Landscape Annual Symposium, New Brunswick, NJ. 2016. Presenter.

Piana, M.R., Kleinbeck, A., and Meixler, M. "Modeling the impacts of sea level rise on ecosystem services of the urban-coastal fringe in Jamaica Bay, New York." ESA. Baltimore, MD. 2015. Presenter.

Piana, M.R. "Bird Conservation and Building Design." GreenBuild International Conference and Expo, Philadelphia, PA. 2014. Presenter.

Piana, M.R., Carlisle, C. "Growing Resilience: Long-Term Plant Dynamics and Green Roof Performance." North American Green Roof Conference. San Francisco, CA. 2013. Presenter.

Piana, M.R., Troxel, B. "Advancing Urban Forestry: Developing Site-Specific Growth Curves. European Forum on Urban Forestry." Leipzig, Germany. 2012. Presenter.

Piana, M.R., Troxel, B. "Urban Biophysical Factors and the Growth and Mortality of Young Urban Trees." Ecological Society of America, Mid-Atlantic Chapter. Harrisburg, VA. 2012. Presenter.

SERVICE & PROFESSIONAL MEMBERSHIP

Center for Resilient Landscapes - Rutgers University and USDA Forest Service

Student Representative (2018-2019)

Hutcheson Memorial Forest Center, Rutgers University

Tour guide and environmental educator (2014-2019)

City of Philadelphia & Philadelphia Parks and Recreation

Volunteer restoration ecologist (2015-present)

Science Advisory Panel for Urban Forest Strategic Plan

Aresty Research Center Undergraduate Fellowship Program, Rutgers University

Undergraduate student mentor (2015-2018)

Wave Hill School

Volunteer environmental educator (2015-2018)

Green Careers, Philadelphia Public School District

Volunteer student mentor (2012-2014)

Environmental Film Festival at Yale

Organizer, Selection Committee Member, Graphic Designer (2009-2012)

Journal Service

- Reviewer: Journal of Urban Ecology, Landscape Ecology, Urban Planning and the Environment, Urban Forestry & Urban Greening, Cities and the Environment, PlosOne, USDA Forest Service Technical Reports
- Volunteer Staff Writer: Ecological Restoration Journal (2015-Present)
- Guest Editor: Scenario Journal (2013, 2019)

Professional Membership

- Urban Biodiversity Network, Patterns and Traits & Management Working Groups (2016-present)
- Ecological Society of America, Urban Ecology Chapter, Restoration Ecology Chapter (2014-present)
- Society for Conservation Biology, Urban Ecology Working Group (2016-present)
- Society for Ecological Restoration, Member (2015-present)
- Torrey Botanical Society, Member (2014-present)
- Philadelphia Botanical Society, Member (2014-present)
- Students for Urban Design and Sustainability, Treasurer (2009-2011)
- Land Use Coalition at Yale, Vice President (2010-2011)